

## Ocean Technical Services



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25 May 2005

### REPORT

#### Investigation of Injury on Tug 'TUCANA'

Prepared at the request of: Mr. David Kaplan, Esq.  
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#### SUMMARY OF CONCLUSIONS

- 1.) It is the opinion of the undersigned, within a reasonable degree of marine probability, the plaintiff's accident was the result of improper and inadequate means of communications aboard the Tug 'TUCANA' for the various evolutions performed.
- 2.) It is the opinion of the undersigned that it is the defendant's failure to remove unnecessary and unrelated gear from the workdeck of the Tug 'TUCANA', in this case a fishing rod that contributed to an unsafe condition aboard causing the injury to the defendant; and that said danger could have been largely eliminated reasonably and inexpensively.
- 3.) It is the opinion of the undersigned that it is the defendant's failure to properly mark with vivid and contrasting paint, the steel guards covering the wire from the pair of push gear winches mounted outboard of the H-bitt on the centerline aft of the deckhouse, and that this situation contributed to an unsafe condition aboard causing the injury to the defendant; and that said danger could have been largely eliminated reasonably and inexpensively.
- 4.) It is the opinion of the undersigned that it is the defendant's failure to properly floodlight the maindeck area aft of the deckhouse where major evolutions were taking place at night.

#### INSTRUCTIONS

Attorney David Kaplan contacted the undersigned in April 2005 via phone and requested two meetings at his office with regard to this incident which included discussions regarding tugboat operations and specifics with regard to this injury suffered by the plaintiff Mr. Frank Saco.

Attorney David Kaplan provided a copy of a deposition of Captain Michael Duarte dated 4 March 2005 and various color copies of photographs of the tug 'TUCANA' marked Exhibit #A, No. 1 - 6 dated 4 March 2005.

Attorney David Kaplan asked the undersigned in early May to review all documents and photographs and provide an expert analysis as to the causes of the injury to the plaintiff considering the type of vessel, working conditions and the customs and practices aboard this vessel.

Tug 'TUCANA'

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#### CURRICULUM VITAE

Joseph Lombardi, Accredited Marine Surveyor (AMS & BW) is President and Owner of Ocean Technical Services (OTS). The firm was founded in 1984 and provides professional marine surveying, project management and consulting services.

Mr. Lombardi conducts condition and value (C & V) surveys on all types of commercial and pleasure craft for marine underwriters, lending institutions and prospective buyers. Depending on the needs of the vessel, he conducts ultrasonic gauging utilizing American Bureau of Shipping (ABS) Standards for Steel and Aluminum Vessels for steel and aluminum hulls. Other services performed include buyer's surveys, trip-in-tow surveys, on and off-hire surveys, damage claim assessments, damage surveys, and drydock/shipyard/yachtyard project management.

Surveys and supervision of the drydocking of yachts and commercial vessels have been carried out in the Russia, United Kingdom, Abu Dubai, New Zealand, Mexico, Japan, Canada, the Caribbean Basin and throughout the United States.

#### Previous Experience

Prior to founding OTS in 1984, Mr. Lombardi served as a wheelhouse officer aboard harbor ship docking tugs and offshore tug/barge oil cargo units at the Boston Fuel & Transportation Co. of Boston, Massachusetts. He also was a deck officer aboard that company's fleet of coastwise oil tankers moving petroleum products from Cape Henry, Virginia to the Canadian Maritimes. (1984-1991)

Antecedent to that, Mr. Lombardi served as a licensed master aboard U.S. Coast Guard inspected coastwise sailing/power yachts and commercial vessels from Maine to the Caribbean Sea (1979 – 1983). Mr. Lombardi also sailed as a deck supervisor and alongside helmsman on replenishment tankers for the U.S. Military Sealift Command from 1978-1979. Prior to this period, Mr. Lombardi served in the U.S. Navy from 1971 to 1977 attaining the rank of QM2, where his specialty was celestial/electronic navigation and helmsmanship aboard the guided missile cruiser U.S.S. COLUMBUS (CG-12), PTF-23 an Osprey-Class PT boat with Coastal River Squadron Two with his final tour aboard the nuclear aircraft carrier U.S.S. NIMITZ (CVN-68). He was the first qualified Master Helmsman aboard the U.S.S. NIMITZ (CVN-68).

#### Certifications

Accredited Marine Surveyor, BW – Society of Accredited Marine Surveyors holding a Blue Water designator signifying an accredited AMS member who has actively engaged in the surveys of ocean-going vessels in excess of 1600 gross tons.

#### Court

Mr. Lombardi is a qualified 'Marine Surveyor' in Federal Court.

#### Licenses

Master (Oceans) – U.S. Coast Guard 1600 tons Steam and Motor vessels.  
First Class Pilot for Vessels of Unlimited Tonnage  
First Class Pilot for Tug/barge Combinations of Unlimited Tonnage  
Master of Auxiliary Sail Vessels 200 tons  
U.S. Merchant Mariner Document AB Seaman  
Radar Observer Unlimited

#### Associations

Northeast Regional Coordinator, Society of Accredited Marine Surveyors (1997-1998)  
Member Society of Accredited Marine Surveyors  
Member Society of Naval Architects and Marine Engineers  
Member American Boat and Yacht Council  
Member American Welding Society  
Member Society of Protective Coatings  
Member Historic Naval Ships Association, current Chairman of Preservation  
Member Society of Testing and Materials  
Member Mariners Club – Boston

#### Education

Undergraduate studies 1 ½ years, Georgia Military College  
Radar Certification Courses, Massachusetts Maritime Academy

#### Recent Speaking Engagements

Trip-In-Tow Surveys, Historic Naval Ships Association  
Towing the M/S PATRIOT STATE, Massachusetts Maritime Academy  
Towing of cruiser U.S.S. SALEM, Society of Accredited Marine Surveyors  
Towing and Drydocking of battleship U.S.S. MASSACHUSETTS, Rhode Island Historical Society  
Towing and Drydocking of battleship U.S.S. MASSACHUSETTS, Mariners Club, Boston  
Towing and Drydocking of submarine U.S.S. LIONFISH, Society of Accredited Marine Surveyors  
Ultrasonic Testing of Steel and Aluminum Vessels, Society of Accredited Marine Surveyors  
Project Management & Preparations for Drydocking a Vessel, Historic Naval Ships Association  
Preparing a Vessel for Tow, Central Naval Museum, St. Petersburg, Russia  
Drydocking a Vessel, Museum of World Oceans, Kaliningrad, Russia

Mr. Lombardi, his wife Rebecca reside on Cape Ann in Manchester, Massachusetts.

#### DOCUMENTATION

My opinions are based on my education and experience, discussions with Mr. Franck Saco and the literature that is pertinent to this area and the review of the deposition testimony.

Specifically, the following claim related documents were reviewed:

- 1.) Deposition transcript of Captain Michael Duarte dated 4 March 2005,
- 2.) Photographs of tug 'TUCANA', Exhibit #A 1 – 6.

Tug 'TUCANA'

## OPINIONS

- I. The operation of this tug, when performing any evolution, particularly line-handling from the aft deck, requires that the operator of the vessel be in the wheelhouse while his crew performed their evolutions aft, often out of sight and at night.

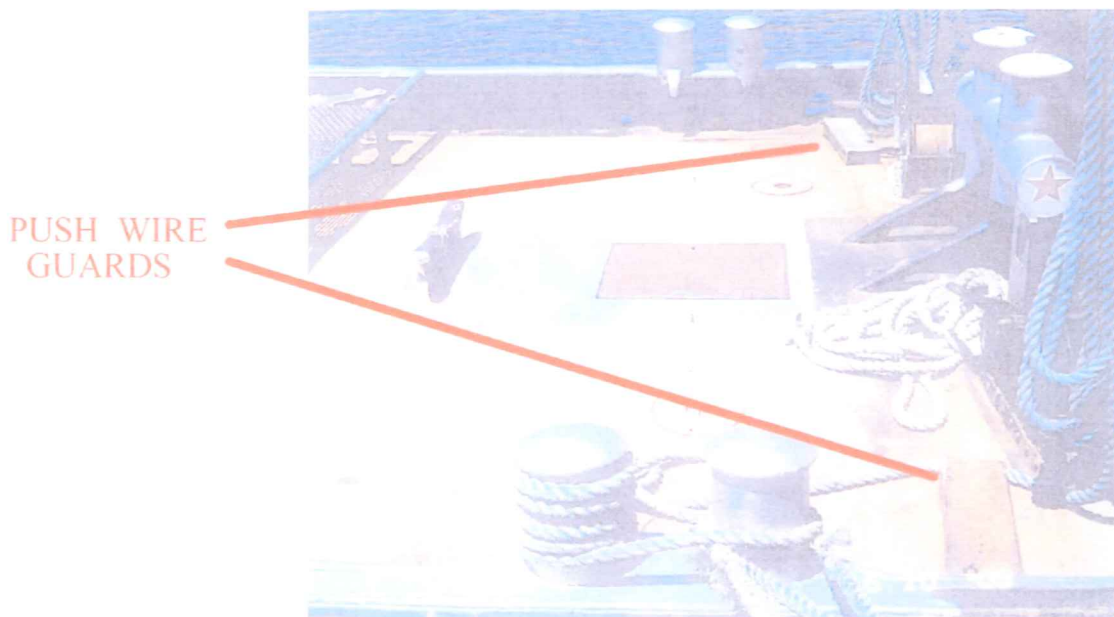
Many tugboats have an aft control station on the 01 Level aft affording the operator the ability to see everything happening below him on the fantail/stern of the tug. The TUCANA does not appear to have this type of equipment (see top photo #3 Exhibit A).

In other instances where the tug would not have an aft control station it has been found advantageous to have a two way voice PA system allowing instant communications between the wheelhouse operator and the deckhand aft. This equipment is not made mention of within the deposition and interview of Frank Saco.

It is my opinion as a former tugboat operator that had there been one of the two methods described this injury may have been averted.

Identified recognized hazardous situations that are causing or are likely to cause death or serious physical harm for which there are no specific OSHA or U.S. Coast Guard standards will be cited under Section 5(a)(1) of the OSHA Act. (See reference C.12.)

- II. A fishing rod is not equipment identified with a tugboat's equipment or appendage and can only be considered in this case to have been a distraction and a contributing cause of Mr. Saco's injury.
- III. The steel guards pictured below and marked are/were a hazard in that they were not marked with contrasting paint scheme, indeed, these guards do not appear to have been marked at all.



The failure to properly mark with vivid and contrasting paint, the steel guards covering the wire from the pair of push gear winches mounted outboard of the H-bitt on the centerline aft of the deckhouse, constitute a 'Trip & Fall' danger and that this situation contributed to an unsafe condition aboard causing the injury to the plaintiff; and that said danger could have

been largely eliminated reasonably and inexpensively. It is the custom and practice in the marine industry (and has been a part of my experience as a tugboat operator) to properly mark any/all appendages that could possibly cause bodily harm.

IV. The amount of floodlighting fixtures is limited to a single outlet on the left side of the tugboat (when looking forward top photo #3 Exhibit A). By any measure, there is not enough floodlighting available to ensure that every area of the fantail is adequately illuminated. The yellow globe decklights present on the overhang outboard of the H-bitt are not considered adequate, in my opinion as a former tugboat operator, for the type of tasking performed at night aboard this vessel.



#### FEE SCHEDULE

\$ 100.00/Hour for travel.

\$ 115.00/Hour for meetings, analysis/report preparation and review.

\$ 165.00/Hour for deposition and trial testimony.

Plus reasonable expenses for travel and boarding.

Costs and expenses for travel, meetings, report testimony, and trial testimony shall be the responsibility of The Kaplan/Bond Group

Tug 'TUCANA'

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PREVIOUS COURT EXPERIENCE

- 1.) Genie Lyn Limited et al (Plaintiffs) v. Delaware Marine Operators, Inc et al (Defendants), 9<sup>th</sup> Circuit Court of Appeals, Lafayette, LA.,
- 2.) Wareham Steamship Corp. & INTECH, Inc. (Plaintiffs) v. Damian Associates, LLC & Tucker Roy Marine Towing & Salvage, Inc. (Defendants), Commonwealth of Massachusetts ,
- 3.) St. Paul Travelers (Plaintiff), et al v. Fairhaven Shipyard et al. (Defendant), U.S.D.C. C.A. No. 04-11314-PBS

EXPERT'S DECLARATION

This investigation is based upon the available information at this time, including my review of deposition and color photograph copies of the tug 'TUCANA' (exhibit #A) and the deposition testimony of Captain Mike Duarte dated 4 March 2005.

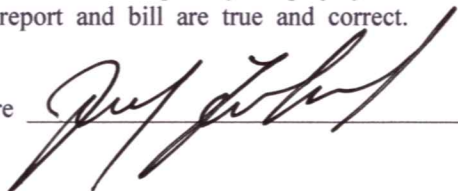
If more information becomes available at a later date, an additional report may be requested. Such information may, or may not change the opinions rendered in this report. I would like to reserve the right to visit this vessel at a later date should that become necessary.

My opinions are based upon reasonable marine practice and my experience as a tugboat operator and as a marine surveyor.

I declare under penalty of perjury that insofar as the facts stated in my report are within my own knowledge I have made clear which they are and I believe them to be true, and the opinions I have expressed represent my true and complete professional opinion.

I declare under penalty of perjury that the information contained in this report is true and correct, to the best of my knowledge and belief, except as to the information I have received from others. As to that information, I declare under penalty of perjury that the information accurately describes the information provided to me, except as may be noted in the report that I believe to be true. I further declare under penalty of perjury that to the best of my knowledge and belief, the contents of this report and bill are true and correct.

Signature



Date

25 May 2005